

Financing the Mozal Project

Mozal represents a leap of faith in the economy of a poor African country that is still recovering from a long civil war and years of central planning.¹

Mozal is a wonderful example of the African renaissance being alive. . . . We know they (the sponsors) are going to make money.²

Takuro Kimura and Akbar Husain of the International Finance Corporation's (IFC) Sub-Saharan Africa Department were adding the finishing touches to a report for the IFC's board of directors. In the report, they were recommending a \$120 million investment in the Mozal project, a \$1.4 billion aluminum smelter in Mozambique. While board approval at the June 1997 meeting was not a binding commitment to lend, it would be their last signoff on the deal and a signal of IFC's commitment to the project. More importantly, their approval would allow the project team to proceed with structuring the deal, even though it could take up to 18 months to finalize all the details.

What made this recommendation difficult was the fact that it would be the IFC's largest investment ever and by far its largest investment in Africa. At \$1.4 billion, it would also be large relative to Mozambique's gross domestic product (GDP) of \$1.7 billion. Perhaps more important than its size, however, was its location. Mozambique was one of the poorest countries in the world and had only recently emerged from a 17-year civil war that had destroyed most of the country's infrastructure. Despite the size and location, Kimura and Husain were recommending approval based on the project's significant economic and developmental benefits. The project was, after all, consistent with the IFC's mission of promoting private sector investment in developing countries as a way to reduce poverty and improve people's lives.

Research Associate Fuaad A. Qureshi prepared this case under the supervision of Professor Benjamin C. Esty. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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¹ N. Shaxson, "Mozal: \$1.34bn Put into the Melting Pot," *The Financial Times*, June 29, 1998, p. 3.

² Cheryl Carolus, South African High Commission, as quoted in "Southern Africa Deal Lifts Project Hopes," *Corporate Finance*, June 1998, p. 8.

THE INVESTMENT OPPORTUNITY

The Mozal project was a joint venture between Alusaf and the Industrial Development Corporation (IDC) of South Africa. Alusaf was the aluminum subsidiary of the Gencor Group, a South African natural resource company. (Exhibits 19-1a and 19-1b provide financial data for both Gencor and Alusaf.) Gencor became the world's fourth largest aluminum producer after acquiring Billiton from Royal Dutch Shell in 1994 and finishing the \$1.8 billion Hillside Smelter in Richards Bay, South Africa, in 1996. Hillside was, at the time, the world's largest greenfield aluminum smelter. As of June 1997, Gencor had two divisions, one for precious metals (gold and platinum) and the other for base metals (aluminum, nickel, steel, etc.), and was in the process of spinning off the base metals division into a publicly traded company under the Billiton name. Paul Snyman and Louis Irvine, Alusaf's Financial director and treasurer, respectively, were leading the Mozal negotiations.

The project's other sponsor was IDC, a \$3.6 billion government-owned development bank located in South Africa with a longstanding business relationship with Alusaf. IDC's mission was to contribute to sustainable growth in South Africa by promoting entrepreneurship and financing private sector enterprises. In fact, IDC was instrumental in financing the Hillside smelter. It regularly took both debt and equity positions in new ventures, though it did not seek control or day-to-day management involvement. As of 1996, IDC's five-year plan called for \$5 billion of industrial investment, including a number of investments outside of South Africa. Jaco Kriek, IDC's head of Project and Structured Finance and its lead negotiator on the Mozal deal, described IDC's involvement this way, "As part of our mandate, we actively seek investment opportunities in Southern Africa as a way to ensure economic stability in the region."

According to the feasibility study, Alusaf and IDC would each own 25% of Mozal; ownership of the remaining 50% had yet to be determined. While it was possible that one or both of the original sponsors would increase its investment, they were more interested in finding an industry participant to join the deal and share the output. Mitsubishi Corporation, the \$78 billion Japanese industrial conglomerate with a large

EXHIBIT 19-1A

GENCOR AND ALUSAF INCOME STATEMENTS ON JUNE 30, 1996 (\$US MILLIONS)

	Gencor Group	Alusaf Group
Turnover	\$3,342.3	\$657.3
Subsidiary turnover	(1,182.1)	0.0
Cost of sales	(1,653.8)	(551.3)
Other operating cost	(53.0)	0.0
Operating Income	453.3	106.0
Investment income	217.6	5.8
Net finance cost	(26.5)	(47.1)
Other costs/income	41.9	0.0
Profit before taxation	686.3	64.7
Taxation	(121.4)	(23.0)
Profit after taxation	564.9	41.7

EXHIBIT 19-1B**GENCOR AND ALUSAF BALANCE SHEETS ON
JUNE 30, 1996 (\$U.S. MILLIONS)**

	Gencor Group	Alusaf Group
Capital Employed		
Shareholders' interest	\$2,752.6	\$ 872.9
Outside interests	610.3	0.0
Long-term loans	679.5	563.7
Long-term provisions	293.1	0.0
Deferred taxation	130.5	187.0
Total capital	4,466.0	1,623.6
Employment of Capital		
Fixed assets	1,820.2	1,455.1
Investments	1,834.8	52.6
Other non-current assets	300.1	0.0
Current assets		
Trading stock	433.2	184.1
Amounts receivable	578.8	145.1
Other	0.0	63.7
Cash resources	852.4	0.0
Total current assets	1,864.4	392.9
Total assets	5,819.5	1,900.7
Current liabilities		
Loans and payables	1,287.6	262.6
Dividends payable	65.9	14.4
Total current liabilities	1,353.5	277.1
Total employment	4,466.0	1,623.6

Note: Assumes 3.996 South African Rand equal \$1.00 U.S.

Source: Company Annual Reports.

metals group, was the leading candidate at the time. Seiei Ono, a senior manager in the Metals Department, had been negotiating a possible deal with IDC and Alusaf.

Aluminum Production

Because aluminum does not occur naturally in its pure form, it must be processed from compounds containing aluminum. The primary raw material for producing aluminum is bauxite, which comes mainly from mines in Australia, Guinea, Brazil, and Jamaica. Once mined, bauxite is refined into an intermediate product called alumina and then transformed into aluminum in a smelter. This energy-intensive process yielded one ton of aluminum for every two tons of alumina.

Aluminum was used primarily in the transportation, construction, packaging, machinery, and electrical industries. Industry demand stood at 20 million tons per year and was expected to grow at 2% to 3% per year. In terms of supply, even though secondary production in the form of recycling and scrap was growing, analysts projected a need for five million tons of new primary capacity over the next ten years.

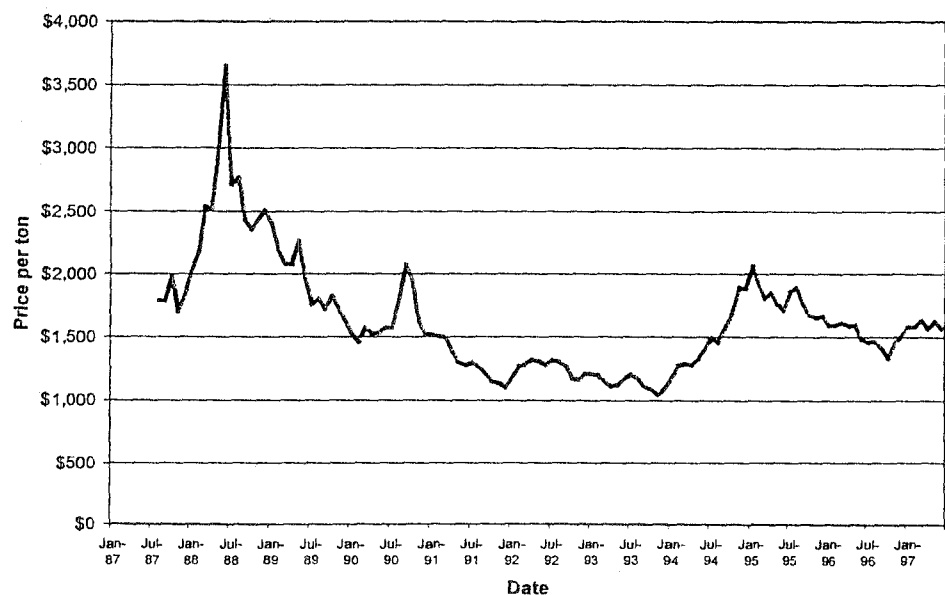
The interaction of supply and demand was the major determinant of aluminum prices. Investment funds, however, also affected market prices and volatility through speculation, particularly during 1995. Exhibit 19-2 shows aluminum prices from the London Metal Exchange (LME) over the past ten years. During this time, prices fluctuated between a low of \$1,040 per ton in November 1993 and a high of \$3,645 per ton in June 1988.

The Mozal Project

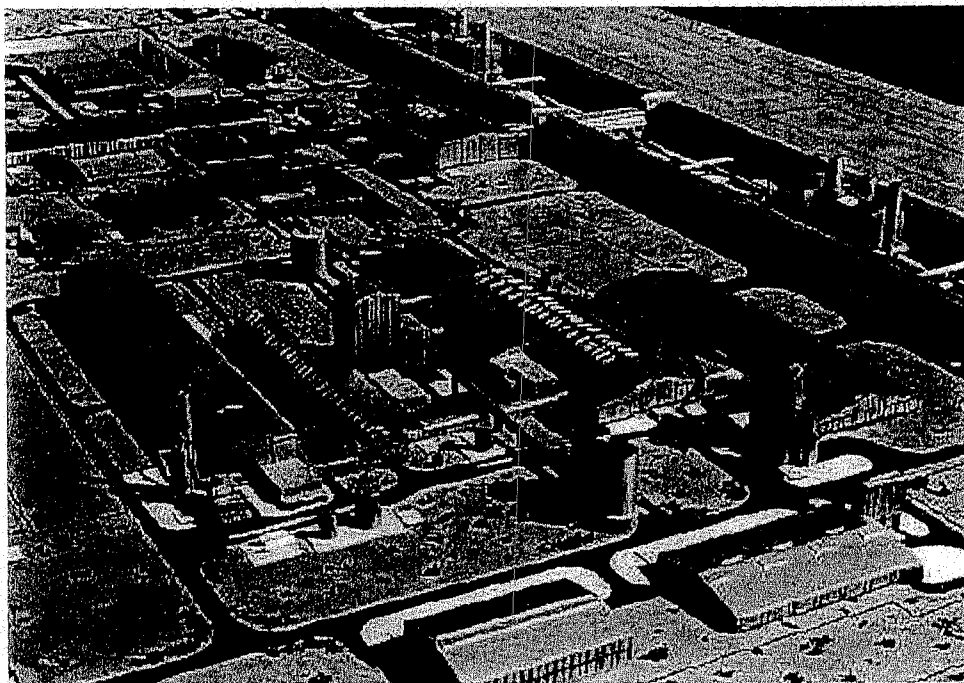
The Mozal project began as the confluence of interests among three entities: Eskom, Alusaf, and the Mozambican government. Eskom, the South African power utility that provided 95% of the country's and 50% of the continent's power, wanted to expand its operations outside of South Africa and utilize some of its excess capacity. In Mozambique, it saw an opportunity to rebuild some of the country's damaged electricity infrastructure and to develop inexpensive hydroelectric-generating capacity on the Zambezi River. Alusaf, too, saw an opportunity in Mozambique. It wanted to build another aluminum smelter making use of the potential availability of hydroelectric power in Mozambique. Such a plant would also benefit from access to Maputo's harbor and proximity to the Hillside smelter in Richards Bay. Given their shared interests, they met with officials from the Mozambican government to see if there were sufficient interest in supporting the construction of a smelter in Mozambique. From these discussions, the parties developed the Mozal project that provided Mozambique with new electri-

EXHIBIT 19-2

LONDON METAL EXCHANGE PRICES FOR PRIMARY ALUMINUM (1987-1997) (CASH SETTLEMENT PRICE \$USD PER TON)



Source: Created from Datastream data.

EXHIBIT 19-3**ARTIST'S RENDITION OF THE MOZAL ALUMINUM SMELTER**

Source: Company documents.

cal and industrial infrastructure, Eskom with an entrée into Mozambique and a customer for its excess power, and Alusaf with a new smelter and access to competitively-priced power.

Exhibit 19-3 provides an artist's rendition of the smelter as it would appear along the Maputo Corridor, a major trading route between Johannesburg, South Africa, and the Mozambican capital of Maputo. The team estimated it would take 34 months to complete the project and another six months to reach full capacity. Although Mozal, a single-potline smelter with annual capacity of 250,000 tons, was half the size of the Hillside smelter, a double-potline smelter with annual capacity of 500,000 tons, it would be constructed with all of the necessary infrastructure to double capacity at some point in the future. For example, the sponsors would have to build a dedicated berth in Maputo harbor to handle the import of raw materials and the export of aluminum, but this berth could handle the plant expansion without additional expense. Like Hillside, Mozal would use proven, state-of-the-art smelting technology from Pechiney of France. And since construction was winding down at the Hillside project, they could use essentially the same project construction team and the same contractors under similar lump-sum, turnkey contracts. Exhibit 19-4 shows the project's sources and uses of cash. Based on these projections, Mozal would have an overall capital cost of \$4,750 per ton compared to an average capital cost of \$4,850 per ton for other recently constructed smelters.

EXHIBIT 19-4**SOURCES AND USES OF CASH (\$ MILLIONS)**

Uses of Cash		Sources of Cash			
Total direct costs	\$ 772	Equity			
		Gencor/Alusaf	\$125		
Total indirect costs	226	IDC	125		
		Others	250		
Capital costs		Total		500	37%
Contingency	75				
Price escalation	90	Quasi-equity (subordinated debt)			
Total	165	Int'l Finance Corp. (IFC)	65		
		Other development			
Start-up costs		financial institutions	85		
Initial working capital	49	Total		150	11
Pre-completion interest	153				
Total	202	Cash generation	35	35	2
Total Uses	1,365	Export credit			
		IDC—arranged	400		
		Coface insured	140		
		Loans			
		Int'l Finance Corp. (IFC)	55		
		Other development			
		financial institutions	85		
		Total Senior Debt		680	50
		Total Sources		1,365	100

Source: Company documents.

In terms of operations, the major inputs needed to produce aluminum were alumina, electricity, labor, and other raw materials. Alumina accounted for approximately one-third of production costs and would be imported from Billiton's Australian operations under a 25-year supply agreement. The sponsors agreed to set the price for alumina as a function of the LME aluminum prices, thereby creating a natural hedge for the project. When output prices were high, input prices would be high, and vice versa.

Eskom and Electricidade de Moçambique (EdM), the Mozambican electricity company, would supply electricity under a 25-year contract. They planned to build two 400 kilovolts (kV) transmission lines from South Africa to Maputo to supply the plant with 450 megawatts (MW) of power. Like alumina, the electricity price would be, at least in later years, a function of LME aluminum prices. Unlike alumina prices, which were set in competitive markets, albeit under long-term contracts, electricity prices were negotiated prices. The variation in negotiated prices combined with the fact electricity accounted for 25% of total production costs, meant that electricity was the most important determinant of a plant's competitive position.

Labor and other raw materials were less important determinants of a plant's competitive position. Initially, the skilled labor and management expertise would come from South Africa. Billiton/Alusaf, in particular, would provide plant management for which it would receive a management fee. The majority of the unskilled labor, both during construction and for operations, would come from Mozambique.

Western-world smelter. Other raw materials, such as coke, petroleum, and liquid pitch, would be imported from the same suppliers that were currently supplying the Hillside smelter under similar long-term supply arrangements.

Finally, there were taxes and other fees. Because the plant was targeted for an Industrial Free Zone, it would be exempt from customs duties and income taxes, though it would be subject to a 1% sales tax. The sponsors planned to purchase all of the output subject to long-term purchase agreements at market prices. Currency exposure was not a problem since the major inputs and all of the output would be denominated in U.S. dollars. A trustee, such as Chase Manhattan Corporation, would be responsible for collecting sale proceeds, paying debtholders, remitting operating expenses, and distributing remaining cash flows to the sponsors in the form of dividends.

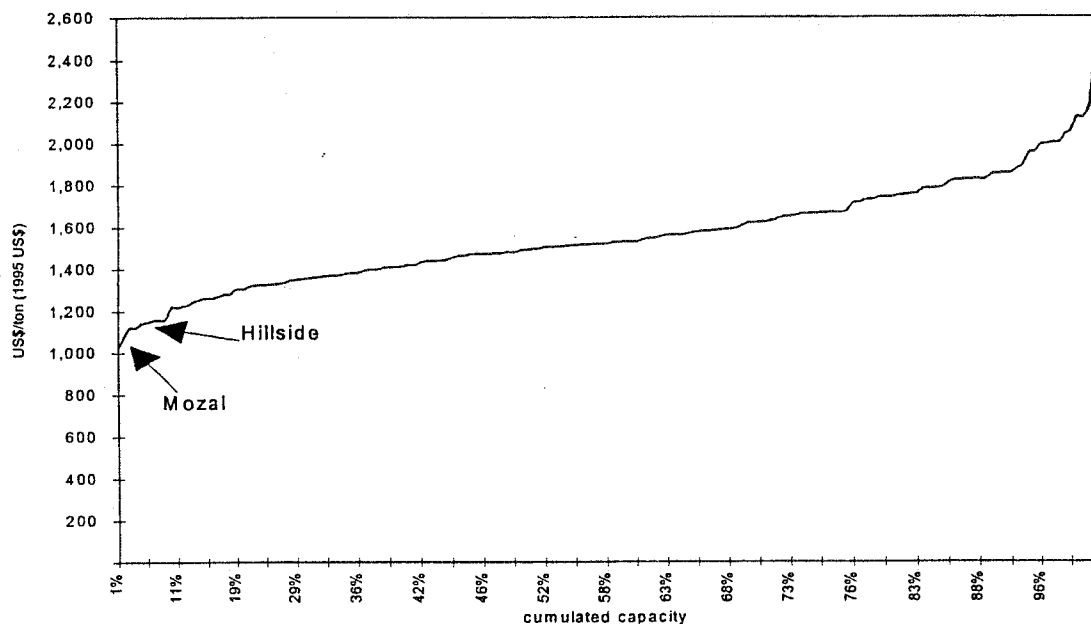
Based on this construction and operating plan, Mozal would be a low-cost producer—its production costs would be in the lowest 5% of industry capacity (see Exhibit 19-5). The average production cost *excluding* depreciation and financing charges for the world's 164 aluminum smelters was \$1,510 per ton. In comparison, Mozal's projected breakeven price *including* depreciation and financing charges was \$1,493 per ton in the fourth year (in constant 1997 dollars), declining to \$1,070 in the eleventh year. These breakeven prices were relatively protected from aluminum price volatility because two-thirds of production costs were variable, of which almost 75% varied with LME prices.

Exhibit 19-6 shows Mozal's projected cash flows in constant 1997 dollars. The projections assumed an aluminum price of \$1,750 per ton compared to a current market

EXHIBIT 19-5

THE WORLD COST CURVE OF ALUMINUM SMELTERS (JUNE 1997)

Graph 8: The World Cost Curve of Aluminum Smelters (1997)
(at LME = US\$1,744/ton)



Sources: CRU International, IFC Analysis.

EXHIBIT 19-6

SUMMARY OF FINANCIAL PROJECTIONS IN CONSTANT 1997 DOLLARS (\$ MILLIONS)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total assets	\$163	\$778	\$1,252	\$1,328	\$1,272	\$1,202	\$1,132	\$1,062	\$991	\$921	\$851	\$750	\$687	\$607	\$570	\$530
Short-term assets/Cash				96	126	142	157	172	188	203	219	204	226	226	226	226
Current senior debt			29	57	70	70	70	70	70	70	70	33	53	13	0	0
Net senior debt	63	366	595	592	522	451	381	311	240	170	100	67	13	0	0	0
Subordinated debt (quasi-equity)		85	144	150	150	150	150	150	150	150	150	120	90	60	30	0
Retained earnings				13	13	13	13	13	13	13	13	13	13	13	13	13
Share capital	100	327	484	500	500	500	500	500	500	500	500	500	500	500	500	500
Total capital	163	778	1,252	1,312	1,255	1,184	1,114	1,044	973	903	833	733	669	586	543	513
Senior debt/Total capital	39%	47%	50%	49%	47%	44%	40%	36%	32%	27%	20%	14%	10%	2%	0%	0%
Current ratio				1.3	1.4	1.6	1.8	2.0	2.1	2.3	2.5	4.0	3.2	7.1	12.8	16.1
DSCR (senior debt) ^a				5.2	1.7	1.6	1.7	1.8	1.9	2.0	2.0	2.1	4.3	3.0	12.1	na
DSCR (total debt) ^a				4.6	1.6	1.5	1.6	1.6	1.7	1.8	1.7	1.4	2.2	1.8	3.4	5.2
Sales				394	429	429	429	429	429	429	429	429	429	429	429	429
Cash flow before interest and principal repayment				170	189	190	190	186	187	187	171	170	171	170	170	170
Interest on senior debt				12	52	47	41	35	29	23	17	11	7	4	1	0
Senior debt principal repayment				29	57	70	70	70	70	70	70	70	33	53	13	0
Equity investment ^b	100	312	216	22												
Dividends and subordinated debt interest				63	51	57	63	66	72	79	68	73	79	106	125	140
Subordinated debt principal repayment												30	30	30	30	30

^a DSCR = debt service coverage ratio = cash flow/(principal + interest).

^b The equity investment includes both equity and subordinated debt (quasi-equity) investments.

Source: Company documents, IFC analysis, and casewriter estimates.

price of \$1,560 in June 1997. Over the past 30 years, there were only two years—1992 and 1993—when the average real price of aluminum price fell below \$1,500 in 1997 dollars. Louis Irvine commented:

Obviously, we would like to see aluminum prices higher, but the project is able to sustain a low LME aluminum price. Hillside was built at a time of low aluminum prices, which rose after the project came to fruition.³

Mozambique: A Brief History

The Portuguese ruled Mozambique as a colony from the sixteenth century until the Marxist Frente de Libertação de Moçambique (Frelimo) declared independence in 1975. Shortly thereafter, a civil war broke out between Frelimo and a rural-based rebel group known as the Resistência de Moçambique (Renamo). A U.S. official described this war as “one of the most brutal holocausts against ordinary human beings since World War II. Between 1975 and 1992, the war claimed the lives of over 700,000 people . . . most of these were victims of the Renamo.”⁴ Besides the human toll, the war destroyed most of the country's infrastructure.

The two sides signed a peace accord in 1992 that ushered in a period of transition from war to peace, from socialism to capitalism, and from one-party rule to democracy. In an effort to hasten the transition to a market economy, the Mozambican government initiated a series of economic reforms. They privatized more than 900 state-owned enterprises, including the Commercial Bank of Mozambique, and removed price controls from goods and services. The country held its first presidential elections in 1994. Frelimo won, but Renamo made a surprisingly strong showing.

Exhibit 19-7 provides macroeconomic data for Mozambique from 1980 through 1996 and clearly shows the devastating effect the war had on the country: real gross domestic product sank and did not recover until the early 1990s. Throughout the period, Mozambique ran enormous current account and government deficits causing it to sink deeper and deeper into debt. War, crime, corruption, and an inefficient Marxist bureaucracy hindered private sector investment and economic development.⁵ According to a study done by the World Bank, starting a new enterprise entailed 12 procedures, 151 steps, and 70 government bodies. If done sequentially, this process could take up to five years.⁶ Conditions were, however, improving, particularly since the end of the war: GDP and foreign direct investment were increasing while inflation was falling. One reflection of these changes was the improvement in the country's *Institutional Investor* and International Country Risk Guide (ICRG) risk ratings from 7.6 to 14.0.

Despite this improvement, Mozambique remained by almost any measure a very poor, underdeveloped country. Exhibit 19-8 compares Mozambique against to Sub-Saharan countries along several dimensions. Relative to other countries, Mozambique had a lower per capita income, higher indebtedness, and higher country risk. According to the World Economic Forum, out of 20 African countries surveyed, Mozambique ranked last in terms of road infrastructure, completion of secondary education, and

³ Andi Spicer, 1999, “Mozal Brings Mozambique into World View,” *Project Finance International Yearbook*, p. 144.

⁴ Imani Countess, “Urge a Prompt, Peaceful Mozambique Vote,” *Christian Science Monitor*, June 23, 1994, p. 19.

⁵ Economist Intelligence Unit, Mozambique Country Profile, 1997–1998, p. 15.

⁶ *Ibid.*, 2nd Quarter, 1997, p. 11.

EXHIBIT 19-8

SUB-SAHARAN AFRICAN MACROECONOMIC DATA (1996 UNLESS OTHERWISE NOTED)

Country	Population (millions)	Life Expectancy (years)	United Nations HDI (1995) ^a		Nominal GDP (\$ mil.)	GDP per Capita (dollars)	1990-96 Real GDP Growth (percent)	Total Debt (% GDP)	ICRG Ratings ^b		Institutional Investor		
			Score	Rank					Political Risk	Composite Risk	March 1997 Rank ^c	March 1997 Rating ^d	March 1990 Rating ^e
Mozambique	18.0	45	0.281	166	\$ 1,715	\$ 90	5.5%	355%	50.0	56.0	116	14.9	7.5
Angola	11.1	46	0.344	156	NA	340	-2.9	37	50.0	54.0	123	12.5	12.2
Botswana	1.5	51	0.678	97	NA	NA	4.8	15	80.5	72.0	45	49.5	NA
Burundi	6.4	47	0.241	170	899	140	-2.6	103	NA	NA	NA	NA	NA
Congo (Zaire)	45.2	53	0.383	143	19,437	NA	-7.0	142	37.0	36.0	131	8.1	8.3
Gabon	1.1	55	0.568	120	5,704	3,620	2.5	76	67.5	58.0	92	24.1	29.8
Kenya	27.4	58	0.463	137	9,272	330	1.9	58	69.0	68.0	81	27.9	29.7
Lesotho	2.0	58	0.469	134	NA	670	5.0	70	NA	NA	NA	NA	NA
Madagascar	13.7	58	0.348	153	4,156	240	0.3	113	58.5	60.0	NA	NA	NA
Malawi	10.0	43	0.334	161	NA	180	3.0	134	63.0	66.0	101	19.8	15.2
Namibia	1.6	56	0.644	107	3,026	2,080	4.3	NA	78.5	80.0	NA	NA	NA
Rwanda	6.7	41	NA	NA	1,330	190	-8.7	77	NA	NA	NA	NA	NA
South Africa	37.6	65	0.717	89	126,301	3,140	0.8	NA	75.5	75.0	51	46.0	34.0
Swaziland	0.9	57	0.597	115	1,069	NA	2.1	22	NA	NA	74	31.8	18.7
Tanzania	30.5	50	0.358	150	NA	130	3.4	136	63.0	62.0	105	18.1	10.1
Uganda	19.8	43	0.340	160	6,005	290	6.9	52	57.5	52.0	107	17.7	5.4
Zambia	9.2	44	0.378	146	4,168	430	0.0	120	61.5	66.0	113	16.1	9.0
Zimbabwe	11.6	56	0.507	130	7,509	620	1.0	42	61.0	65.0	71	32.3	27.8

^a The United Nations Human Development Index (HDI) is a rating of human development across 174 countries. The score ranges from 0 (low) to 1.00 (high); the rank ranges from 1 (high) to 174 (low).

^b The International Country Risk Guide (ICRG) provides a rating composed of 22 variables in three subcategories of risk: political (100 points), financial (50 points), and economic (50 points). ICRG provides ratings for 140 countries on a monthly basis.

The political risk rating measure a country's political stability.

The composite risk rating equals the sum of the individual ratings divided by two: 0.0 to 49.5 is very high risk; 80.0 to 100.0 is very low risk.

^c The *Institutional Investor rank* is out of 135 rated countries (low numbers represent less risky countries).

^d The *Institutional Investor rating* is based on a survey of 75 to 100 international bankers who were asked to grade each country on a scale of 1 to 100, with 100 representing the least chance of default.

Sources: African Development Indicators (various years), World Bank, United Nations, and Institutional Investor International Edition.

legal effectiveness (i.e., stability and certainty of the legal system). It ranked second to last in terms of openness to trade, and time and expense needed to obtain permits and licenses.⁷

What was most noticeable at this stage in the country's development was the speed with which things could and were changing. For example, the Economist Intelligence Unit (EIU) painted a somewhat pessimistic picture of the situation in early 1996:

[T]he country is a long way from being truly calm or stable. . . . There may well be more violent confrontations . . . (because) the degree of bitterness between the two groups (Frelimo and Renamo) remains excessive. . . . The delicate peace and new democratic system have come under increasing strain in recent months and it is clear that, ultimately, an improvement in the political situation is dependant on an improvement in the economy.⁸

Yet only a year later in 1997, the EIU had become decidedly more optimistic:

The economic outlook is bright, and will be underpinned by buoyant international investment, which has been responsive to the government's ongoing commitment to monetary reform and prudent monetary and fiscal management. . . . On the economic front, the government is hoping that its continued withdrawal from key spheres of formal economic activity, complemented by heavy investment in infrastructure and the simplification of the archaic regulatory environment will underpin real GDP growth and make in-roads in alleviating rural poverty.⁹

Recognizing these problems, the Mozambican government was actively trying to improve the macroeconomic situation and the climate for private sector investment. It had recently applied for entry into the Highly Indebted Poor Countries (HIPC) Debt Initiative, a debt forgiveness program established by the World Bank and the International Monetary Fund (IMF) in 1996 to help poor countries achieve overall debt sustainability. With regard to investment, it signed the Investment Protection and Promotion Agreement with the South African government in May 1997. In this agreement, the governments pledged to honor and protect cross-border investments. And finally, the government established a special liaison committee to shepherd the Mozal project through the country's Byzantine regulatory and administrative procedures.

When asked why Alusaf wanted to invest in Mozambique given its history and current state of affairs, Irvine replied, "In addition to the attractive power tariffs, attractive labor costs, and very favorable investment incentives, we have a well-structured deal. We have identified the risks and dealt with them appropriately." Alusaf's chairman, Rob Barbour, added:

Our role as sponsors is to create an environment for success. This means empowering the Mozambican people with job training, AIDS awareness programs, and additional housing. It also means establishing commercial ties with local businesses to bolster the Mozambican economy.

FINANCING THE MOZAL PROJECT

The sponsors planned to finance the \$1.4 billion project using a combination of equity (including \$35 million of cash generated during start-up), subordinated debt, and

⁷ World Economic Forum, 1998, *The African Competitiveness Report—1998* (Geneva, Switzerland).

⁸ Economist Intelligence Unit, *Mozambique Country Report*, 1st Quarter, 1996, pp. 4–5.

⁹ *Ibid.*, p. 10.

senior debt (see Exhibit 19-4). Alusaf and IDC each planned to invest \$125 million, while one or more additional equity partners would invest another \$250 million.

Next, the deal would contain \$150 million of 15-year subordinated debt, with \$65 million coming from the IFC and \$85 million coming from other development institutions. The subordinated debt would have a fixed, base interest rate, a variable interest rate component linked to Mozal's total sales, and a repayment schedule beginning in year 11. In return for giving away some of the upside, the sponsors asked for, and expected to get some, concessions on the downside. During periods of low LME prices, the subordinated lenders would defer both base and variable interest payments.¹⁰ Because the value of the subordinated debt was dependent on project performance, it was considered "quasi-equity."

Finally, senior debtholders would provide \$680 million, or 50% of total capital. IDC and Coface (Compagnie Française d'Assurance pour le Commerce Extérieur), a French export credit agency (ECA) supporting the use of Pechiney technology, would arrange \$540 million of ECA covered finance. ECAs were bilateral organizations that insured creditors in an effort to promote domestic exports. To encourage participation by South African banks, IDC was in advanced discussions with the Credit Guarantee and Insurance Corporation (CGIC), the South African ECA, about providing insurance for \$400 million of senior debt. This type of insurance would protect creditors against losses resulting from commercial insolvency and political risks like war, expropriation, breach of contract, or currency inconvertibility. Coface, too, was expected to provide 85% cover for loans made by French banks. Development institutions, including the IFC, would provide the final \$140 million.

At this stage, none of the lenders had committed any funds, even though the sponsors had held preliminary discussions with a series of banks, ECAs, and development agencies. The banks, however, seemed to be the real logjam and convincing them to participate had become a top priority. On the one hand, the sponsors had a proven track record. Irvine noted, "Fortunately, we had the Hillside smelter as an example to show potential lenders—we finished that project four months ahead of schedule and 21% under budget." On the other hand, this was Mozambique, not South Africa. IDC's Jaco Kriek knew it would be a challenge to get the banks on board:

Initially, the banks had no interest in financing a Mozambican project, especially a limited-recourse deal. From their perspective, IFC involvement was absolutely necessary. They (the IFC) have lots of experience in emerging markets and know how to structure deals. But in the end, it has to be a team effort. We need everyone—banks, development agencies, ECAs, committed governments, quality sponsors, and an experienced international operator—to raise the funds.

Alusaf's Louis Irvine echoed these sentiments: "There is no doubting the IFC's importance. They bring credibility to a project and provide comfort to potential lenders." Rather than convincing the banks to participate in the deal, the challenge became one of convincing the IFC to participate.

THE INTERNATIONAL FINANCE CORPORATION (IFC)

The International Finance Corporation (IFC), a member of the World Bank Group, promoted private sector investment in developing countries as a way to reduce poverty and improve people's lives. Founded in 1956 and owned by its 172 member countries,

¹⁰ Spicer, "Mozal Brings Mozambique into World View," p. 143.

the IFC was the world's largest multilateral source of debt and equity financing for private sector projects. The IFC differed from other multilateral development institutions such as the African Development Bank (AfDB) or the European Bank for Reconstruction and Development (EBRD) because its loans were not backed by sovereign guarantees and its capital was paid-in rather than callable on demand.

Since 1956, it had committed more than \$21.2 billion in financing for its own account and arranged over \$15 billion in syndications and underwriting in 129 developing countries.¹¹ To be eligible for IFC funds, projects must have private ownership, be commercially viable and environmentally sound, and provide significant development benefits to the local economy. Exhibit 19-9a provides a summary of IFC approvals and commitments since 1988. In the year ending June 1997, the IFC was expected to approve 275 projects, invest \$3 billion for its own account, and make \$400 million of net income. Exhibit 19-9b provides the regional breakdown of these investments—only 7% of total investments were in Sub-Saharan Africa. Exhibits 19-10a and 19-10b show the IFC's ten largest investments worldwide and in the Sub-Saharan African region, respectively.

Most of these investments, particularly the greenfield projects, were in risky country environments. In fact, in a survey of 233 recent greenfield projects financed by the IFC, 77% were in countries with an *Institutional Investor* rating of less than 45 at the time of approval and 27% were in high-risk countries with a rating of less than 25.¹² In contrast, approximately 10% of all project finance deals occurred in countries with a rating less than 25. As noted by a senior IFC official, the corporation was supposed to invest in high-risk countries: "Our goal in life is to disappear, to no longer be needed. But until then, our job is to go to the places no one else wants to go, and to finance the projects no one else wants to finance." Such a strategy, however, could easily jeopardize the IFC's AAA rating and its ability to attract low-cost funds for investment purposes.

IFC as a Development Lender

The IFC contributed to development lending by appraising prospective projects, structuring the legal and financial documents, providing long-term capital, and deterring sovereign interference. A multidisciplinary team including investment officers, economists, engineers, lawyers, and industrial experts did the initial review. The goal of the appraisal was to uncover information about the project, the sponsors, and the host government that might not be widely available or well understood by other lenders. In particular, the appraisal was meant to evaluate project risks and returns, sovereign risks, and overall consistency with a country's long-run growth strategy. The IFC was uniquely qualified to do this analysis given its extensive experience with development lending and its ties to local governments through its association with the World Bank.

For the Mozal project, the appraisal lasted from January to March 1997 and was paid for by the sponsors. It concluded that the project was viable and had acceptable financial and economic rates of return. The *financial* rate of return was the project's internal rate of return based on constant price projections of pre-interest, *after* income tax cash flows less project costs (free cash flow). The *economic* rate of return was the project's internal rate of return to the host country. It was based on constant price projections of pre-interest, *before* income tax cash flows adjusted for economic distortions and transfer payments, less project costs. If successful, Mozal would have a very

¹¹ IFC Annual Report, 1997, p. 1.

¹² International Finance Corporation, 1999, *Project Finance in Developing Countries*, Lessons of Experi-

EXHIBIT 19-9A

SUMMARY OF IFC FINANCIAL AND OPERATING STATISTICS, 1980-1997 EST.

Year	Number of Projects Approved	Total Approved Financing for Own Account	Total Committed Portfolio for Own Account	Number of Firms in Committed Portfolio	Non- Accrual Loans as % of Total ^a	Principal in Arrears as % of Total ^b	Net Income (millions)	Total Assets ^c (millions)	Total Assets less Derivatives ^c (millions)
1980	55	\$ 681	\$ 402	288	n/a	n/a	\$ 20.7	\$ 908	\$ 908
1981	56	811	749	314	n/a	n/a	19.5	1,085	1,085
1982	65	612	1,049	333	n/a	n/a	21.6	1,233	1,233
1983	58	845	1,267	341	n/a	n/a	23.0	1,314	1,314
1984	62	696	1,622	349	n/a	n/a	26.3	1,390	1,390
1985	75	937	1,979	366	n/a	n/a	28.3	1,673	1,673
1986	85	1,156	2,518	377	18.0%	4.1%	25.4	2,236	2,236
1987	92	920	3,260	404	15.8	6.1	53.8	2,814	2,806
1988	95	1,039	3,374	454	11.1	5.0	100.6	3,427	3,425
1989	92	1,292	4,045	468	7.5	3.2	196.5	4,006	3,995
1990	122	1,505	4,752	495	5.2	2.5	157.0	5,606	5,580
1991	152	1,540	5,494	618	5.6	2.3	165.9	6,648	6,594
1992	167	1,773	6,423	703	6.7	3.7	180.2	8,133	7,908
1993	185	2,133	7,132	798	8.3	4.3	141.7	8,913	8,698
1994	231	2,463	7,893	868	7.2	4.0	258.2	14,723	10,122
1995	213	2,877	9,461	939	6.5	3.9	188.0	18,228	11,977
1996	264	3,248	9,844	985	5.6	3.3	345.8	22,640	14,502
1997 Est.	276	3,317	10,521	1,046	4.9	2.7	431.9	28,975	17,575

^a Nonaccrual means the loans are not accruing interest in a timely fashion.

^b Principal in arrears means the amount of principal not paid when it was due.

^c The dollar value of derivatives represents receivables from currency swaps, interest rate swaps, and covered forwards not the *net* notional amount. Prior to 1994, derivative usage was reported as the difference between derivative receivables (an asset) and derivatives payables (a liability).

Source: International Finance Corporation, Annual Reports.

EXHIBIT 19-9B**IFC INVESTMENTS BY REGION AS OF JUNE 30, 1997 (\$ MILLIONS)**

Region	Investments Held for IFC (\$ millions)			
	Loans	Equity at Cost	Total	Percent of Total
Latin America and the Caribbean	\$3,278.2	\$ 773.2	\$ 4,051.4	38.4%
Asia	2,284.5	606.6	2,891.0	27.4
Europe	1,080.3	335.7	1,416.0	13.4
Central Asia, Middle East, and North Africa	1,003.2	246.3	1,249.5	11.8
Sub-Saharan Africa	594.4	188.1	782.5	7.4
Worldwide investments	82.0	87.3	169.3	1.6
Total	8,322.5	2,237.7	10,559.7	100.0

Source: International Finance Corporation: 1997 Investment Portfolio.

significant developmental impact and, therefore, an attractive economic rate of return. Exhibit 19-11 provides an analysis of IFC's historical investment performance, in terms of *ex ante* (before investment) versus *ex post* (following investment) rates of return for investments made between 1978 and 1995.

According to the appraisal, the project would increase exports by \$430 million, GDP by \$157 million (by 9%), and net foreign exchange by \$161 million per year. Mozal would also generate 5,000 construction jobs and 873 permanent jobs—90% of the permanent positions would be held by Mozambicans—as well as develop human capital among Mozambicans through managerial, health, and other skills training. Besides building human capital, the IFC hoped the project would provide critical infrastructure and spur investment along the Maputo Corridor. One of the IFC's most important contributions in the appraisal stage was its environmental and social impact assessment. The IFC worked with the sponsors and the Mozambican government to ensure these issues were discussed and handled properly. The IFC was known for the quality of its due diligence, especially in high-risk environments where such information was difficult to collect and interpret. In many deals, particularly syndicated deals, other creditors wanted, and often paid for, a copy of the IFC's information memorandum. Much of the information contained in the offering memoranda came from the IFC's detailed appraisal analysis.

In those instances where the appraisal yielded positive results, the IFC then took a leading role in structuring the legal and financial contracts. Through the years, it had acquired a reputation as an "honest broker" because it insisted that projects be fair to all parties including the sovereign entity involved. This focus on fairness stemmed from a deep-seated belief that "if it's not fair, it's not sustainable." If nothing else, the lesson from the large number of expropriations in the 1960s and 1970s was that greedy sponsors created their own demise by front-loading income and trying to extract maximum returns. The IFC's multilateral ownership structure, whereby it represented many varied interests, and its development objectives further enhanced its reputation for fairness.

A simple example shows how the IFC could create value for all parties by structuring fairer deals. Consider a project that cost \$105 to build. Assuming no IFC in

EXHIBIT 19-10A**TEN LARGEST IFC INVESTMENTS AS OF JUNE 30, 1997 (\$ MILLIONS)**

Project Name	Country	Sector	Year of Investment	Original Commitment		Investments Held for IFC		
				Total IFC	Total in Syndicate	Loans	Equity at Cost	Total
1) Star Petroleum	Thailand	Oil Refining	94	\$100.0	\$350.0	\$100.0	\$ 0.0	\$100.0
2) Thai Petrochemicals	Thailand	Chemicals	97	100.0	400.0	100.0	0.0	100.0
3) Ispat Industries	India	Mining/Extraction	92,95,97	102.8	85.0	85.5	5.8	91.3
4) Aguas Argentinas	Argentina	Infrastructure	96	85.0	307.5	75.1	7.0	82.1
5) Ceval Alimentos	Brazil	Food/Agribusiness	93,96	90.0	130.0	68.6	10.0	78.6
6) Compañía Teléfonos	Venezuela	Infrastructure	96	75.0	185.6	75.0	0.0	75.0
7) Sadia Concórdia	Brazil	Food/Agribusiness	94,95,97	80.0	222.0	64.0	10.0	74.0
8) Hopewell Power	Philippines	Infrastructure	93	70.0	11.0	60.0	10.0	70.0
9) Mass Transit System	Thailand	Infrastructure	97	69.7	0.0	59.8	9.8	69.7
10) Bidas S.A.P.I.C.	Argentina	Mining/Extraction	93,96	80.0	100.0	42.1	25.0	67.1

EXHIBIT 19-10B**LARGEST IFC INVESTMENTS IN SUB-SAHARAN AFRICA AS OF JUNE 30, 1997 (\$ MILLIONS)**

Project Name	Country	Sector	Year of Investment	Original Commitment		Investments Held for IFC		
				Total IFC	Total in Syndicate	Loans	Equity at Cost	Total
1) Pecten Cameroon	Cameroon	Mining/Extraction	92,96,97	\$74.5	\$177.9	\$ 49.3	\$ 0.0	\$ 49.3
2) Energy Haute Mer	Congo Rep.	Mining/Extraction	96	46.8	25.0	43.9	2.9	46.8
3) Mines d'Or	Mali	Mining/Extraction	95	39.8	25	35.0	4.8	39.8
4) Block CI-11	Côte d'Ivoire	Mining/Extraction	93,95	38.7	0.0	0.0	38.7	38.7
5) Panafrican Paper	Kenya	Timber/Paper	70,90,96	69.0	4.0	30.0	4.5	34.5
6) Minière de Syama	Mali	Mining/Extraction	94	28.1	0.0	26.7	1.4	28.1
7) Mobil/Nigeria	Nigeria	Mining/Extraction	91	75.0	95	22.5	0.0	22.5
8) SA Capital Growth	South Africa	Financial Services	96	20.0	0.0	0.0	20.0	20.0
9) Tourist Co.	Nigeria	Hotels/Tourism	94	17.5	0.0	15.0	2.5	17.5
10) Goldfields Ltd.	Ghana	Mining/Extraction	90,92,97	27.0	18.5	13.6	3.0	16.6
255 other investments	34 countries					236.0	77.8	313.8
Total						594.4	188.1	782.5

Source: International Finance Corporation: 1997 Investment Portfolio.

EXHIBIT 19-11**IFC INVESTMENT RETURNS, 1978–1995**

Region	Median Rates of Return (ROR) 347 IFC Projects Completed from 1978–1995			
	Financial ROR ^a		Economic ROR ^b	
	Ex Ante ^c	Ex Post ^d	Ex Ante ^c	Ex Post ^d
Africa	18.0%	9.0%	19.0%	10.0%
Asia	19.0	14.0	20.0	13.0
CAMENA ^e	20.5	11.4	24.0	13.6
Europe	19.4	12.0	19.9	15.0
Latin America ^f	20.0	13.0	20.0	12.0
Average	19.0	12.0	20.0	12.0

^a Financial rate of return (ROR) is the project's internal rate of return based on constant price projections of pre-interest, after-tax cash flows, less project costs.

^b Economic rate of return (ROR) is the project's internal rate of return based on constant price projections of pre-interest, pre-tax cash flows adjusted for economic distortions and transfer payments, less project costs.

^c *Ex ante* estimates were made prior to project implementation.

^d *Ex post* estimates were made during an Investment Assessment Report which is typically done several years after project implementation.

^e CAMENA = Central Asia, Middle East, and North Africa.

^f Includes the Caribbean.

Source: IFC Economics Department, cited in the Annex to *Private Sector and Development: Five Case Studies*, The World Bank, March 1, 1997.

volvement, the project would succeed with probability 66.7% and be worth \$150 to the sponsor, or would be expropriated with 33.3% probability and be worth \$0 to the sponsor. Thus the expected value is negative \$5, equal to $[(66.7\% \times \$150 + 33.3\% \times \$0) - \$105]$, which means the sponsor would not invest. With IFC involvement, the project would be worth less to the sponsor, say \$130, but more to the host government because of transferred benefits. As a result, the probability of expropriation might fall to 10%. In this case, the expected value becomes \$12, equal to $[(90\% \times \$130 + 10\% \times \$0) - \$105]$, and the sponsor would be willing to invest. Both sides are better off compared to not building the plant.

Having structured thousands of deals in developing countries, the IFC had considerable experience in coordinating large, diverse groups and resolving complex legal issues. Azmat Taufique, the manager of the IFC's Mining Division, commented:

We are in the business of making finance happen in difficult settings. The IFC brings cutting-edge tools and analysis to complex project finance problems, and it provides solutions that are acceptable to wide-ranging parties in all kinds of settings. One measure of our success is the fact that sponsors not only come to us to do the hard deals, but come back to us for other deals.

Two examples of where the IFC could play an advisory role in the Mozal transaction were the integration of diverse legal systems and the definition of the circumstances under which the expropriation of the plant would be handled.

Mozambique had a civil law system based on statutes from the colonial era. In contrast, South Africa had a common law system based on judicial rulings and precedent. These two systems were fundamentally different, yet would have to be reconciled in a single set of legal documents. In the past, IFC had successfully resolved this kind of issue, though it was not always an easy thing to do. The benefit of having well-constructed legal documents was that they greatly simplified dispute resolution when and if there were disagreements.

A second potentially complicated legal issue, particularly given the setting, revolved around the sponsors' completion guarantees. As with any deal, the parties would have to agree on definitions of both technical and financial completion. The more contentious issue, however, was what kinds of political events would release the sponsors from this obligation. For example, if the Mozambican government increased taxes, causing a 5% reduction in the sponsors' equity value, would that constitute a sufficiently important political event to justify ending their contractual obligation to finish the project? What if the government expropriated 50% of equity value? While acts of total expropriation had become relatively rare in recent years, "creeping" expropriation was much more common. For example, the Indonesian government raised tariffs from 0% to 20% on the Chandra Asri project's primary input in 1996; the Indian state government of Maharashtra unilaterally canceled contracts with Enron on the Dabhol power project in 1995, and the Thai government refused to honor promises to increase and share tolls with the contractor of a newly constructed toll road in Bangkok in 1993.

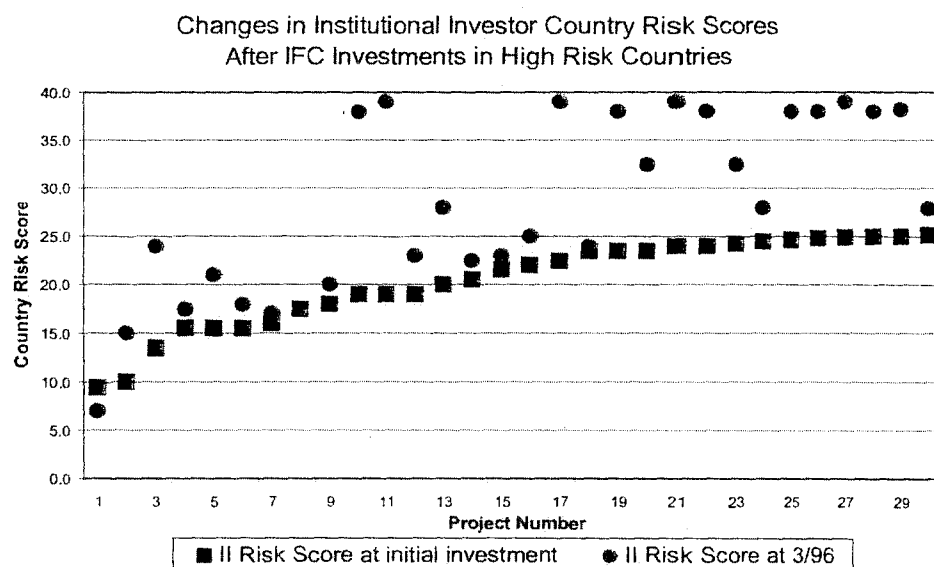
Once the legal documentation was complete, the IFC provided long-term financing in a variety of forms: senior debt, subordinated debt (quasi-equity), and equity. The senior debt was further broken down into two types of loans: "A loans" for the IFC's own portfolio and "B loans" for syndication to other institutions, with the IFC as the lender of record. For the Mozal deal, in particular, the sponsors had requested an A loan only.

Three features distinguished IFC participation. First, it was willing to make loans with longer maturities (7 to 12 years on the senior debt and 8 to 15 years on the subordinated debt), which provided better matching for long-lived project assets. Next, it was willing to lend on a subordinated basis, thereby exposing itself to greater losses. And third, the IFC valued development benefits. Thus, compared to private lenders, the IFC could either accept a lower financial rate of return for the same risk, or it could accept more risk for the same financial rate of return. In both cases, the economic rate of return would make up the difference. But this approach, could get the IFC in trouble, as one government official observed:

The IFC is on a mission impossible. If it acts like a development bank and the return on investment is too low, it gets criticized for being imprudent. If, on the other hand, it (acts like a merchant bank) and gets into a project that is attractive and steals business from, say, Citicorp, it gets rapped on the knuckles for competing with the private sector using public funds.¹³

When, and if, the IFC agreed to participate, it had a catalytic or "demonstration" effect on other lenders. It increased the likelihood that others would participate in the deal at hand and it was supposed to generate future investment in other private sector ventures. Exhibit 19-12, which shows how country risk ratings change following IFC investment in high-risk countries, provides some evidence on IFC's role as a catalyst for future investment.

¹³ J. Friedland, "The IFC's Identity Crisis," *Institutional Investor*, September 1986, p. 139.

EXHIBIT 19-12**THE IMPACT OF IFC INVESTMENT ON COUNTRY RISK SCORES**

Source: IFC Financing Private Infrastructure (Washington, DC, 1996), p. 23.

Finally, the IFC played a role in deterring adverse sovereign actions that could result in either default or reduction in equity value. As an “honest broker,” the IFC made sure a project was consistent with a country’s long-run development strategy in an effort to reduce the incentives for short-term opportunistic behavior. It structured deals accordingly and then led the annual project review to ensure the contracts were being upheld.

The fact that the IFC was part of the World Bank Group also helped reduce political risk. The historical record shows that governments gave higher priority to obligations from multilateral lending institutions such as the World Bank Group when they could not service all of their external debt. One of the main reasons why they have received preferential treatment was that they are often the only source of new lending to countries in financial distress. In fact, IFC debt repayments have never been included in a sovereign debt rescheduling or a general debt-servicing moratorium.

Because of this track record, rating agencies like Standard & Poor’s (S&P) asserted that IFC involvement conferred an “umbrella” or “halo effect” on projects and a “preferred status” on creditors. Referring to this effect, an S&P analyst noted:

[T]he halo effect does exist, and it comes primarily from two sources—deterrence value and indirect access to a multilateral’s preferred creditor status. . . . (The IFC’s) preferred creditor status is not a matter of law, but one of well-established conduct.¹⁴

¹⁴ S. G. Smith, “Benefits and Limits of Official Sources of Infrastructure Credits, *Infrastructure Finance*,” p. 10.

CONCLUSION

Even though many aspects of the deal were still undetermined (e.g., who would provide the other 50% of the equity, who would buy 50% of the output, how were they going to structure the sponsors' completion guarantees, etc.), Kimura and Husain had been instructed by their superiors to prepare a recommendation for the IFC's Board on the grounds that

Authorization at this time of IFC's proposed investment would enhance the IFC's leadership role, send a strong signal to prospective investors, and ultimately facilitate the timely completion of the negotiations.

While Kimura and Husain were arguing for approval, they were, nevertheless mindful of the risks created by such a large investment. Their colleague, Azmat Taufique, who agreed with the recommendation, raised the critical issue that the Board would have to decide:

The real question here is not whether to do a deal in Mozambique—there is clearly a need—but rather whether this is the right time and the right deal to be making such a large investment, especially when several important features are still unresolved.

The project team believed in their recommendation but wondered whether the Board would agree that the potential financial and developmental benefits justified the risks. If the IFC's largest investment were to subsequently fail, the failure would call into question the IFC's ability to assess project risk and structure deals in emerging markets. Perhaps more important than the IFC's reputation would be the cost to Mozambique in terms of lost development opportunities. A highly visible failure, for whatever reason, might deter future investment for many years to come. With these thoughts running through their minds, Kimura and Husain began printing their report.